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The Implementation of Integrated Health Services for Post-Disaster Communities in Agam Regency, West Sumatra, Indonesia

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Abstract

Background of study: The natural disaster in Agam Regency, West Sumatra, have disrupted access to health services and increased the risk of acute illness, exacerbating chronic illnesses, and causing psychosocial problems. This situation demands a rapid, integrated, and adaptive health response to the limitations of post-disaster facilities. This community service activity aims to improve access and quality of health services for disaster-affected communities through an integrated approach to medical services and logistics distribution.

Methods: The program was implemented over three days at several locations and health posts in Agam Regency. Activities included cross-sector coordination, implementation of health services, daily evaluation, reporting, and planning for sustainability. Interventions included basic and advanced medical services, post-operative wound care, chronic disease management, home-visits, and medical assistance.

Result: Health services were provided for more than 200 patients, predominantly with cases of hypertension, upper respiratory tract infections, dermatitis, musculoskeletal disorders, and diabetes mellitus. The home visit approach successfully reached vulnerable groups with limited mobility.

Conclusion: The use of simple health technology and family involvement improved continuity of care and community empowerment. This program has supported physical health recovery in post-disaster communities and has the potential to be replicated in other disaster-affected areas.

A. Introduction

The floods and landslides that struck West Sumatra in late November 2025 had extensive and far-reaching consequences. The National Disaster Management Agency (Badan Nasional Penanggulangan Bencana, BNPB) reported that 16 districts/cities in West Sumatra were affected by the disaster. One of the districts that experienced significant impacts from the floods and landslides was Agam Regency, especially in five sub-districts: Palembayan, Malalak, Tanjung Raya, Palupuh, and Matur. Data from the Agam Regency Regional Disaster Management Agency (Badan Penanggulangan Bencana Daerah, BPBD) indicated that 3,919 residents remain displaced due to damaged houses and being located in the disaster red zone. The displaced residents were spread across the districts of Palembayan (1,023 people), Palupuh (198 people), Tanjung Raya (2,159 people), Ampek Koto (53 people), Matur (156 people), and

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Malalak (330 people) (Antara Sumbar, 2025). Most of the evacuees are temporarily living in evacuation centers, government offices, shelters, mosques, prayer rooms, neighbors' homes, and schools. 191 people were reported deceased, and 4,300,000 were displaced due to the loss of their houses (National Disaster Management Agency, 2025). The disaster also damaged public infrastructure, including health and educational facilities, roads, and bridges.

In addition to damaged infrastructure, the disaster also caused severe health consequences for thousands of residents. Vulnerable groups, such as toddlers, the elderly, pregnant women, and people with disabilities, faced a higher risk of malnutrition, infectious diseases, and psychological trauma. The crowded refugee camps and limited facilities worsened the physical and mental health of affected communities, compounded by limited access to health services. As of December 25th, 2025, this natural disaster had resulted in 261 deaths and 382 injuries (National Disaster Management Agency, 2025). Case records indicated that upper respiratory tract infections (URTI), hypertension, fever, influenza, skin irritation, musculoskeletal pain, rheumatism, gastritis, and diarrhea were the most frequently reported diseases.

The Agam Regency Health Office recorded 2,264 people suffering from acute respiratory infections (ARI). Other illnesses with the highest number of cases were hypertension (1,062 cases), myalgia (1,019 cases), skin infections (598 cases), and gastritis (463 cases) (Antara Sumbar, 2025). This was further compounded by the number of victims suffering from severe injuries from being swept away by floods and buried by landslides, as well as the increasing need for routine medications for chronic illnesses that were interrupted after the disaster. Overcrowded refugee camps with inadequate facilities further worsened the physical and mental health of affected communities, compounded by limited access to healthcare services (WHO, 2026).

Disasters of this scale often disrupt essential health infrastructure. Reports indicate that healthcare facilities are frequently damaged or rendered non-functional during floods and landslides, leaving communities without timely access to medical care. Children are particularly vulnerable, with increased incidence of respiratory infections, diarrheal diseases, and nutritional deficiencies in temporary shelters (Save The Children, 2025). At the same time, psychosocial impacts such as stress, anxiety, and trauma are widespread among evacuees, especially those who lost homes, livelihoods, or family members (IFRC, 2023).

Given these challenges, community service programs play a crucial role in bridging gaps in disaster response. By integrating medical services with non-medical assistance such as food distribution, hygiene supplies, and psychosocial support, these programs can mitigate immediate suffering while also strengthening resilience. Furthermore, collaboration with local health authorities and the use of digital tools for monitoring and logistics can enhance efficiency, sustainability, and scalability in future disaster settings.

B. Methods

The Community Service Program for flood victims in Agam Regency was implemented through systematic stages, aimed at ensuring that the activity was implemented effectively, promptly, and with a sustainable impact on affected communities. The method used included five main components: coordination, technology implementation, evaluation, reporting, and program sustainability follow-up. Each stage was designed based on the identified problems and the community's needs from the emergency response period in the early recovery phase.

1. Coordination Phase

The coordination phase represented the initial step in establishing a shared understanding among the team, target partners, and stakeholders at the site.

a. This activity included :

Coordination with the Health Office, village officials, and the Agam Regency Disaster Medical Team to determine work areas (locations of aid posts and refugee camps), validate victim data, determine medical personnel and the type of medical assistance needed (including medicines and medical equipment), create reporting records, and determine aid priorities.

b. Identification of vulnerable groups (infants, toddlers, the elderly, pregnant women, breastfeeding mothers, and people with disabilities) to ensure the program reached those who need it the most.

After the emergency disaster in Agam Regency, West Sumatra, the Tarumanagara University (UNTAR) team immediately undertook preparatory measures prior to and upon arrival at the disaster site. Upon arrival in Lubuk Basung, the capital of Agam Regency, the team immediately coordinated with the Health Emergency Operation Center (HEOC) of the Health Office and the Agam Regency Disaster Medical Team to arrange the work area.

2. Technology Implementation Phase

This phase was the core of the program, which involved integrating technology implementation, aid distribution, and health services as needed on the ground. Activities of this phase included:

a. Providing emergency health services at posts/evacuation locations/shelters, including post-operative wound care for disaster victims and providing basic medications (antipyretics, oral rehydration salts, antibiotics) for infections (skin infections, diarrhea, fever, acute respiratory infections), and chronic cases (hypertension, diabetes).
b. Technology-assisted home visits, where the Disaster Response Team visited patients or victims unable to access health posts. These visits were coordinated using mobile communication platforms and GPS-based mapping systems, enabling efficient route planning and prioritization. Teleconsultation with supervising physicians was also utilized when needed to support clinical decision-making in the field.
c. Integrated logistics distribution, including the distribution of medical and non-medical assistance. Medical assistance, including essential medicines, was coordinated through the Health Office and subsequently distributed to community health centers and health posts. Non-medical assistance, such as baby diapers, milk, biscuits, blankets, sarongs, and meals, was directly distributed to evacuees.

3. Evaluation Phase

The evaluation phase served to comprehensively record the activities, evaluate their effectiveness alongside challenges faced in the field, and coordinate for the next day's activity. Evaluation was conducted daily, in collaboration with other disaster emergency response teams in Agam Regency, under the coordination of the Health Office and the Agam Regency Disaster Medical Team.

4. Reporting Phase

The multidisciplinary team, comprising two medical specialists (Clinical Pharmacology and Psychiatry), two master's-level professionals in the medical field (Nutrition and Physiology), two general practitioners, and five clinical-stage medical students, was responsible for preparing a comprehensive final report on community service activities. This report encompassed the implementation processes, outputs, achievements, challenges encountered, and recommendations for follow-up actions.

5. Program Sustainability and Follow-up Phase

To ensure long-term impact, this activity was designed with a sustainability strategy that strengthened networks with the Regional Government and Health Office, thereby fostering ongoing collaboration, particularly in addressing long-term health issues.

C. Results and Discussion

This community service was conducted for three days from December 17th to 19th, 2025. The multidisciplinary team was dedicated to delivering comprehensive health services, addressing both physical and psychological needs of the affected population. The UNTAR team's first day activity was carried out at the shelter houses, which are residential homes designated for evacuees who have recently been discharged from hospitals and are unable to return home. Healthcare services are provided at three shelters in Talago Bawah, Pasar Padang Baru, and Sitingkah Tapi (Figure 1).

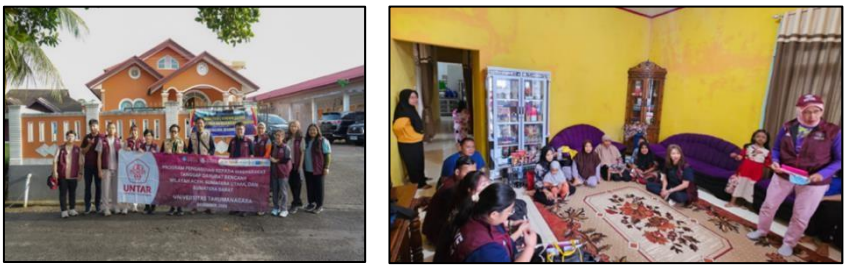

Figure 1. The UNTAR team at the Talago Bawah shelter house

Services were provided to 33 patients at the three shelter houses, including post-surgical wound care, medical consultations, and medication administration as prescribed (Table 1, Figure 2). The UNTAR team also provided non-medical assistance, defined as supportive interventions addressing basic daily needs and promoting social well-being. These included the distribution of essential supplies such as baby diapers, milk, biscuits, blankets, sarongs, and ready-to-eat meals. This non-medical support was intended to enhance comfort, maintain hygiene, and facilitate recovery by reducing environmental and psychosocial stressors among evacuees, thereby indirectly strengthening adherence to medical care and overall health outcomes.

Table 1. Data of Health Services at the shelters (Day 1)

Shelter	Demographic data	Total (N=33)	Percentage (%)
Talago Bawah (N=20)	Gender:		
	Male	8	24,24
	Female	12	36,3
	Age (years):		
	10-19	2	6,06
	20-29	0	0
	30-59	16	48,48
	>60	2	6,06
	Diagnosis:		
	Post-trauma	1	3,03
	Post-fracture surgery	4	12,12
	Ulcer	1	3,03
	Shoulder pain	1	3,03
	Low back pain	1	3,03
	Post-procedure	2	6,06
	Hypertension	1	3,03
	Genu arthritis	1	3,03
	Peripheral neuropathy	1	3,03
	Dyspepsia	1	3,03
	Gravida	1	3,03
Pasar Padang Baru (N=5)	Gender:		
	Male	2	6,06
	Female	3	9,09
	Age (years):		
	0-9	1	3,03
	10-19	1	3,03
	20-29	1	3,03
	30-59	2	6,06
	>60	0	0
	Diagnosis:		
	Post-fracture surgery	2	6,06
	Post-trauma	3	9,09

Sitingkah Tapi (N=8)	Gender:		
	Male	1	3,03
	Female	7	21,21
	Age (years):		
	20-29	2	6,06
	30-59	6	18,18
	Diagnosis:		
	Post-trauma	4	12,12
	Common cold	2	6,06
	Upper respiratory tract infections	2	6,06
	Post-fracture surgery	1	3,03
	Hypertension	1	3,03
	Vertigo	1	3,03

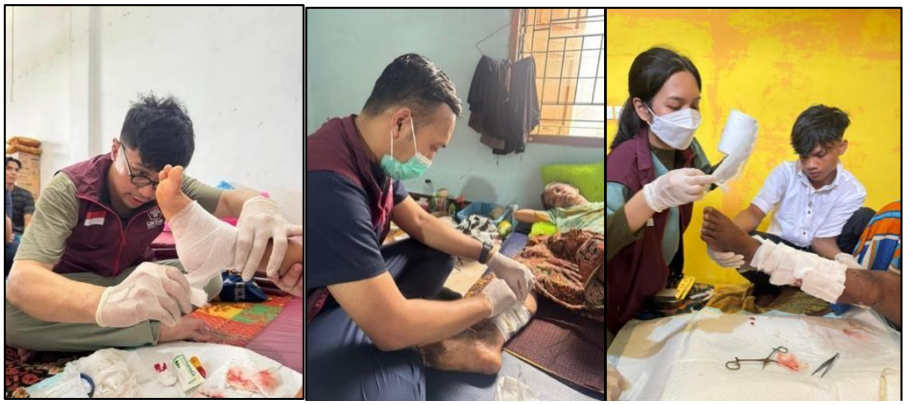

Figure 2. Wound Care Services in the shelter house

On the second day, as directed by the Health Office's HEOC Team, the UNTAR team was divided into two teams. The first team was assigned to the area around Lake Maninjau, in the Tanjung Raya District. Healthcare services were provided at three posts: The Bayua Village Office, the Kampuang Jambu Village Office, and the Sawah Liek Village Office, for 61 patients (Figure 3, Table 2).

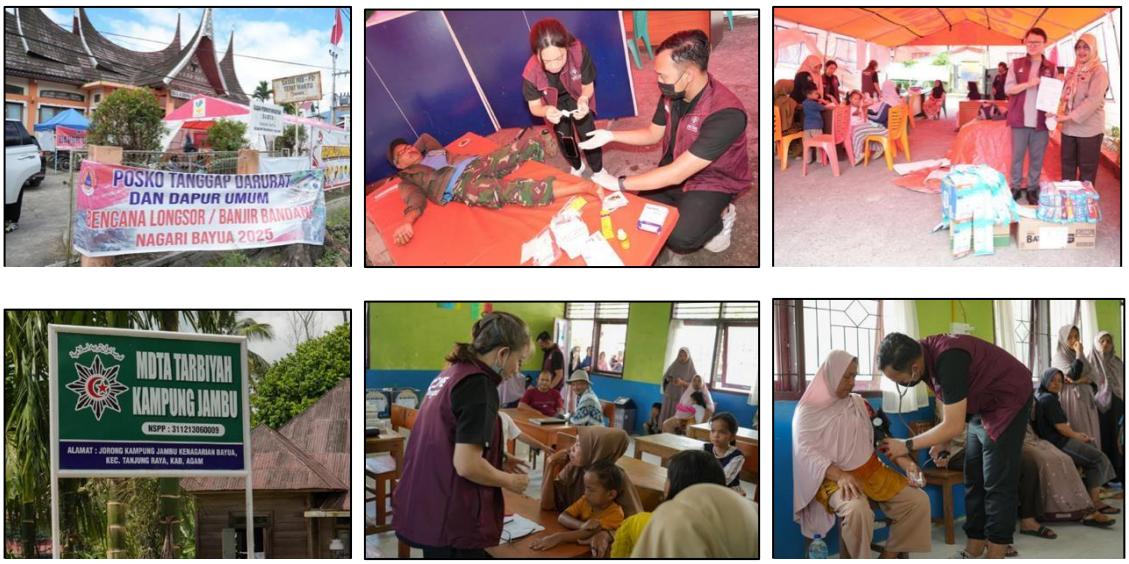

Figure 3. Health Services in Tanjung Raya District Area

Table 2. Health Services in Tanjung Raya District Area (Day 2)

Shelter	Demographic data	Total (N=61)	Percentage (%)
Kantor Nagari Bayua (N=9)	Gender:		
	Male	3	4,92
	Female	6	9,84
	Age (years):		
	30-59	5	8,20
	>60	4	6,56
	Diagnosis:		
	Dermatitis	2	3,28
	Hypertension	2	3,28
	Dyspepsia	2	3,28
	Upper respiratory tract infections	2	3,28
	Diabetes mellitus	1	1,64
	Mouth ulcers	1	1,64
Jorong Kampuang Jambu (N=35)	Gender:		
	Male	7	11,48
	Female	28	45,90
	Age (years):		
	0-9	1	1,64
	10-19	0	0
	20-29	3	4,92
	30-59	15	24,59
	>60	16	26,23
	Diagnosis:		
	Hypertension	10	16,39
	Upper respiratory tract infections	9	14,75
	Dermatitis	4	6,56
	Myalgia	3	4,92
	Hypercholesterolemia	2	3,28
	Dyspepsia	2	3,28
	Tension type headache	2	3,28
	Post-cesarean section	1	1,64
	Gravida	1	1,64
	Cataract	1	1,64
	Diabetic neuropathy	1	1,64
Jorong Sawah Liek (N=17)	Gender:		
	Male	4	6,56
	Female	13	21,31
	Age (years):		
	10-19	3	4,92

20-29	0	0
30-59	9	14,75
>60	4	6,56
Diagnosis:		
Upper respiratory tract infections	9	14,75
Dermatitis	2	3,28
Hypertension	2	3,28
Peripheral neuropathy	2	3,28
Acute gastroenteritis	1	1,64
Hemorrhoid	1	1,64
Myalgia	1	1,64
Tension Type Headache	1	1,64

This activity included distributing non-medical aid to residents. The second team, along with the Disease Prevention and Control (P2P) Team from the Agam Health Office, visited evacuees in the Nagari Bayua area. On this occasion, the UNTAR team also distributed non-medical aid, such as blankets, to evacuees in the mountain area.

On the third day, the UNTAR team continued their duties in the Tanjung Raya District at 2 posts, namely Jorong Jalan Batuang and Jorong Sawah Rang Salayan (Figure 4). The activity included home visits to elderly patients who were unable to go to health service locations (Figure 5). Healthcare services on the third day were conducted for 128 patients, as presented in Table 3.

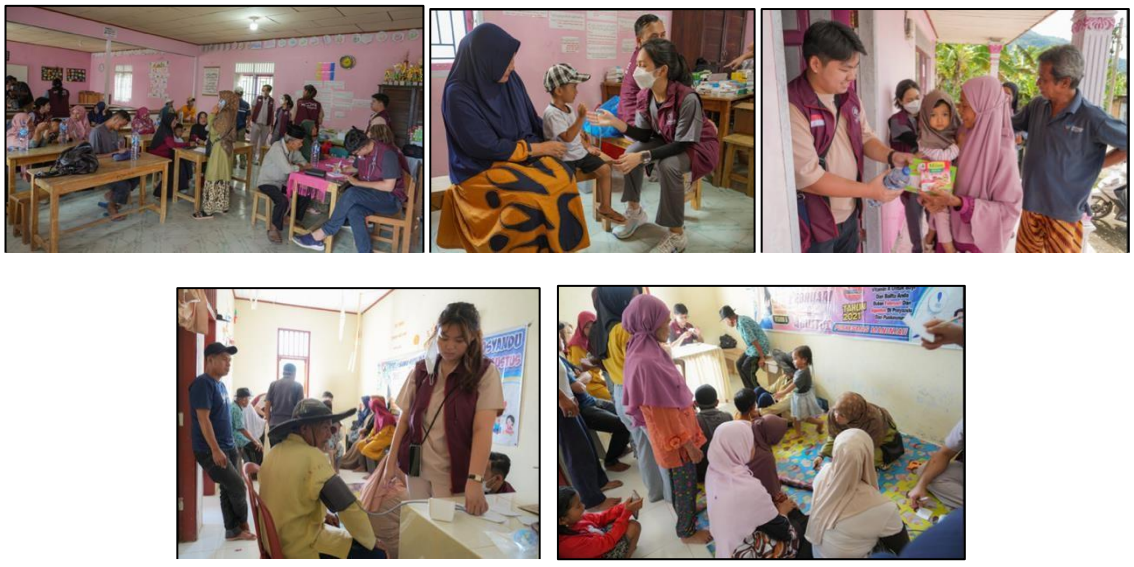

Figure 4. Health Services on Jorong Jalan Batuang and Jorong Sawah Rang Salayan

Table 3. Health Services in Tanjung Raya District (Day 3)

Shelter	Demographic data	Total (N=128)	Percentage (%)
Jorong Jalan Batuang (N=60)	Gender:		
	Male	25	19,53
	Female	45	35,16
	Age (years):		
	0-9	8	6,25
	10-19	2	1,56
	20-29	3	2,34
	30-59	27	21,09

	>60	20	15,63
	Diagnosis:		
	Dermatitis	20	15,63
	Hypertension	7	5,47
	Osteoarthritis	5	3,91
	Myalgia	5	3,91
	Upper respiratory tract infections	5	3,91
	Hernia nucleus pulposus	5	3,91
	Common cold	5	3,91
	Tension-type headache	4	3,13
	Diabetes mellitus	4	3,13
	Dyspepsia	4	3,13
	Vertigo	3	2,34
	Peripheral neuropathy	2	1,56
	Post-trauma	1	0,78
	Cataract	1	0,78
	Urinary tract infection	1	0,78
	Folliculitis	1	0,78
	Gravida	1	0,78
	Asthma	1	0,78
Jorong Sawah Rang Salayan (N=68)	Gender:		
	Male	30	23,44
	Female	38	29,69
	Age (years):		
	0-9	1	0,78
	10-19	2	1,56
	20-29	0	0
	30-59	35	27,34
	>60-69	30	23,44
	Diagnosis:		
	Hypertension	19	14,84
	Dermatitis	12	9,38
	Dyspepsia	10	7,81
	Myalgia	9	7,03
	Common cold	8	6,25
	Peripheral neuropathy	7	5,47
	Osteoarthritis	6	4,69
	Hernia nucleus pulposus	5	3,91
	Tension type headache	4	3,13
	Diabetes mellitus	4	3,13
	Caries dentis	3	2,34
	Asthma	2	1,56
	Conjunctivitis	1	0,78
	Hypercholesterolemia	1	0,78
	Insomnia	1	0,78
	Upper respiratory tract infections	1	0,78
	Menometrorrhagia	1	0,78
	Dry eye	1	0,78
	Cardiomegaly	1	0,78
	Urinary tract infection	1	0,78
	Vertigo	1	0,78

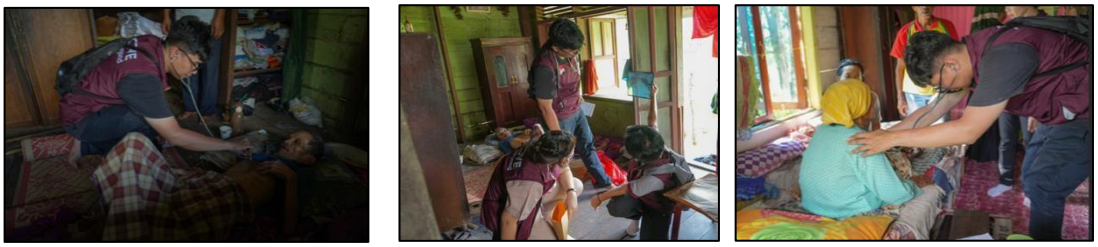

Figure 5. *Home-visits*

The results of this program indicate that the disease of flood and landslide victims in Agam Regency were dominated by upper respiratory tract infections, skin diseases (dermatitis), musculoskeletal disorders (myalgia, osteoarthritis), and chronic diseases, such as hypertension and diabetes mellitus. These findings are consistent with the characteristics of post-disaster health problems caused by the crowded, humid, and limited sanitation conditions of evacuees' camps. Research shows that hydrometeorological disasters, such as floods and landslides, significantly increase the risk of infectious diseases, especially respiratory infections, skin diseases, and waterborne infections due to disruptions in clean water supply and sanitation systems. High-density evacuees' camps and limited ventilation create an appropriate environment for the transmission of respiratory pathogens, while prolonged exposure to floodwater and high humidity increase the incidence of dermatitis and other skin infections. The predominance of adults and elderly age groups in most locations confirms that disasters not only cause acute injuries but also exacerbate pre-existing degenerative and chronic diseases. Empirical evidence suggests that natural disasters disproportionately affect vulnerable populations, particularly the elderly with comorbid conditions, due to disruptions in routine medical care and access to essential medicines (Acosta-España et al., 2024; Basaria et al., 2023; Demaio et al., 2013; Liang & Messenger, 2018; Mokdad et al., 2005).

The implementation of integrated health services through health posts, shelters, and home visits can reach a wider range of affected populations, including vulnerable groups with limited mobility. This activity shows that home visits are a key strategy in ensuring continuity of basic health services for the elderly and post-operative patients who cannot access health posts. Evidence from the literature on emergency health response demonstrates that mobile health units and mobile clinics are effective strategies for conducting syndromic assessments and providing medical services in inaccessible locations after disasters. Findings from a review on the use of mobile clinics in humanitarian emergencies demonstrate that this strategy effectively expands the reach of primary health-care, disease-specific interventions, and mental health services in a wide range of disaster settings. This approach demonstrates that flexible and necessary service models are more effective than static, facility-based approaches in disaster contexts. Studies of mobile health units in natural disasters confirm that flexibility in service delivery models (including the ability to adjust location, hours of operation, and types of services based on real-time needs assessments) is a critical factor in reaching affected populations who may face geographic, physical, or social barriers to access conventional health care (Awad et al., 2025; McGowan et al., 2020; Sheerazi et al., 2025; Taylor et al., 2007).

The project results demonstrated that employing simple health technologies such as standardized wound care kits, digitally assisted screening forms, and structured record-keeping can enhance the quality and consistency of medical care in the field. Standardizing postoperative wound care in the hospital helps prevent infectious complications and reduces reliance on limited referral facilities. A review of wound management in disaster situations emphasized that effective care in resource-limited settings can be achieved through relatively simple measures, yielding substantial benefits in reducing mortality and morbidity. These findings confirm that, in emergency situations, appropriate and easily replicable technologies often have a greater impact than advanced technologies that are hard to use. Research on mobile app-based triage systems for mass incidents demonstrates that simple digital systems not only match the performance of conventional paper-based tools but can even surpass them in efficiency and usability, with the potential to optimize processes in disaster medicine and ultimately save more lives. Implementing appropriate point-of-care technology in emergency situations requires identifying design criteria that take into account infrastructure limitations, ease of use by field personnel with minimal training, and the ability to operate in challenging environmental conditions (Killeen et al., 2006; Lenert et al., 2011; Mecozzi et al., 2010; Schmollinger et al., 2024; Wuthisuthimethawee et al., 2015).

The high proportion of cases of hypertension, diabetes mellitus, and neuropathy on the second and third days of activity suggests that disasters directly impacted the management of chronic diseases. Interventions such as routine medication administration, medication adherence education, and simple monitoring during home visits play a crucial role in preventing disease exacerbations. Evidence from the literature indicates that natural disasters present major public health challenges. Preparation efforts are typically centered on evacuation, transportation, shelter, and the prevention of acute infectious diseases, while the needs of patients with chronic conditions requiring continuous care are often overlooked. These findings demonstrate that post-disaster health care cannot focus solely on acute illnesses but must incorporate chronic disease management as an integral part of the public health response. A qualitative study of global expert perspectives on models of care for noncommunicable diseases in crisis situations recommended that models of care for hypertension and diabetes in crises should adapt to the context, type of crisis, and phase of the response, with an emphasis on primary care models, essential medicines, standardized devices, and task shifting as key strategies. Continuity of medication management has been identified as a meaningful measure of continuity of care and may be a potential target for future interventions to improve care delivery among patients with multiple chronic conditions (Ansbro et al., 2022; Beadles et al., 2014; Chan et al., 2021; Mokdad et al., 2005).

Although not quantified, field observations indicate that many victims, particularly women and the elderly, experienced anxiety, stress, and emotional exhaustion due to the loss of shelter and post-disaster uncertainty. Basic psychosocial support and brief counseling provided by the community service team helped create a sense of security, increase self-confidence, and strengthen the community's psychological resilience. The literature indicates that the psychological and social impacts of disasters undermine the long-term well-being of affected populations, with moderate to severe psychological distress developing in 30 to 50% of those affected, and the incidence of mild to moderate mental disorders (mood and anxiety disorders) estimated to increase by 5 to 10%. These findings strengthen the evidence that mental health interventions are an essential component of post-disaster health care and cannot be separated from physical medical services. A scoping review of psychosocial interventions delivered by non-mental health workers following disaster events identified that, although many psychosocial interventions targeting post-disaster distress exist, few have been rigorously tested, with interventions such as Problem Management Plus and Self-Help Plus receiving a high evidence rating in post-disaster care. Community-based mental health and psychosocial support interventions can effectively reduce symptoms of depression, anxiety, and stress, with large effect sizes across all variables, particularly in depressive symptoms (Adristi et al., 2025; Budosan et al., 2014; Garriott et al., 2023; Lotzin et al., 2023; Varker et al., 2025).

Providing non-medical aid in the form of meals, blankets, milk, biscuits, and baby supplies has proven effective in supporting the physical resilience of communities, particularly those living in mountain areas with cold climates and limited access. The availability of these necessities indirectly contributes to the effectiveness of medical interventions, as communities are in a more stable physical condition to receive health services. Research on post-disaster humanitarian logistics emphasizes that effective coordination of various types of humanitarian aid resources, especially when resources are limited, is crucial to assist governments and non-governmental organizations in allocating and coordinating relief resources effectively and efficiently. Integrating logistics, distribution, and medical services is a crucial strategy in reducing post-disaster health vulnerabilities. Food and shelter standards in humanitarian action emphasize that food and shelter security during disaster response is achieved through enhanced preparedness, which should include risk assessment, contingency planning, stockpiling of equipment and supplies, emergency services, and standby arrangements. While the program successfully met basic needs, the standards were only partially fulfilled due to constraints such as limited deployment duration, logistical challenges, and resource limitations inherent to the disaster setting. Future improvements may include strengthening pre-disaster planning, integrating digital logistics tracking systems, establishing local supply chain partnerships, and extending the duration of field operations to ensure more sustainable and standardized service delivery. Literature suggests that emphasizing equitable distribution of supplies may increase the number of rescue vehicles and distribution costs, but it ensures that the basic needs of affected populations are met fairly, thereby supporting the effectiveness of health interventions (Guan et al., 2020; Pothiawala, 2015; Wang et al., 2018; Yan et al., 2023).

Community empowerment activities demonstrate a shift in the community's role from passive recipients of assistance to empowered partners. Active family involvement in wound care, medication supervision, and health monitoring demonstrates increased capacity and ownership of their own health. Evidence from the literature suggests that capacity-building programs involving disaster response training and

simulations successfully equip community members with the necessary skills and knowledge to fulfill their roles within a disaster response framework, thereby strengthening local resilience and promoting community-based disaster management. This integrated, educational, and community-based model has the potential for sustainability and replication in other disaster areas with similar characteristics, and supports the transition from an emergency curative approach to a more self-sufficient and sustainable community health recovery. The community resilience framework for high-risk populations emphasizes the importance of placing adaptive capacity at the center as a focal point, surrounded by four strategic areas (human well-being, engagement and connectedness, security and safety, and services and resources), with three drivers of adaptive capacity (empowerment, innovation, and collaboration) that cut across these strategic areas and represent levers for building community resilience. Research shows that a health promotion approach to emergency management, which strengthens community action, improves the likelihood of better outcomes. Case studies demonstrate the value of shared communication, strong leadership, community empowerment toward common goals, and the adaptation of interventions to specific contexts (Corbin et al., 2021; Fasrini et al., 2023; Khotimah et al., 2023; Sayuti et al., 2025; Sobelson et al., 2015).

To enhance the long-term impact of this program, sustainability and scalability should be reinforced through closer collaboration with local health authorities, capacity building of community health workers, and the development of standardized intervention protocols that can be replicated in other disaster settings. Although the current program primarily reports descriptive outcomes due to the rapid and emergency nature of implementation, future initiatives should incorporate measurable evaluation indicators, such as clinical improvement, service coverage, and patient-reported outcomes, to better assess effectiveness. Furthermore, the field findings from this program highlight several actionable implications, including the need to improve logistics coordination, integrate digital tools for real-time monitoring and distribution, and adopt a more structured approach that combines medical and psychosocial interventions. Collectively, these strategies would enable more efficient, sustainable, and scalable disaster response efforts.

D. Conclusion

The Community service program for disaster emergency response implemented by the Faculty of Medicine Tarumanagara University in Agam Regency, West Sumatra, demonstrated that an integrated health service approach can effectively address the health needs of post-disaster communities. The integration of medical services and the distribution of basic logistics successfully reached vulnerable groups, including the elderly, post-surgery patients, and communities with limited access to healthcare services. The use of simple health technology and home visit strategies increased service coverage, maintained continuity of care for acute and chronic illnesses, and reduced dependence on limited referral health facilities post-disaster. In addition to impacting physical health recovery, this program also contributed to increasing the empowerment of disaster-affected communities. The active involvement of families and communities in basic care, chronic disease management, and health monitoring demonstrated a shift in the community's role from passive recipients of assistance to more independent partners. This integrated, educational, and community-based model has the potential for sustainability and replication in other disaster areas with similar characteristics, and supports the strengthening of public health systems in responding to future emergencies and post-disaster recovery.

E. Acknowledgment

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F. Author Contribution Statement

This study was a collaborative effort involving thirteen authors, each contributing distinct expertise to ensure the success of the project. SG and HK led the conceptualization and overall project design, while AH and MI developed the methodology and coordinated field operations. YF, DG, BA, AT, AS, and IB were responsible for data collection, managing local logistics, and stakeholder engagement. NS, DD, and

RU prepared health intervention protocols and provided technical guidance. SG and YF carried out the literature review and synthesized frameworks on emergency health response. The manuscript drafting, editing, language polishing, and alignment with journal requirements were shared among SG, YF, and DG. Finally, HK and MI secured funding and provided administrative support. All authors reviewed the manuscript critically, contributed valuable feedback, and approved the final submission.

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